

WHAT IS CLAIMED

1. A laminate comprising

1) a substrate

2) a stain resistant and adherent layer on said substrate, comprising the cross-linked reaction product of at least;

a) at least one amino resin cross-linking agent and either

b1) reactive polyester resin and

b2) a hydroxyl terminated polymer including repeat units from an oxetane having a pendant $-\text{CH}_2-\text{O}-(\text{CH}_2)_n-$ Rf group orc) a reactive polyester resin including therein at least one repeat unit derived from copolymerizing into said polyester a hydroxyl terminated polymer including repeat units from an oxetane having a pendant $-\text{CH}_2-\text{O}-(\text{CH}_2)_n-$ Rf group, or combinations of a), b), or c),

wherein said Rf group, independently, being a linear or branched alkyl group of 1 to 20 carbon atoms and a minimum of 25 percent of the hydrogen atoms of said alkyl group being replaced by F, or said Rf group, independently, being a oxaperfluorinated or perfluorinated polyether having from 4 to 60 carbon atoms, and n being from 1 to 3 and optionally, up to 20 wt%, based on the weight of said hydroxyl terminated polymer, of a cyclic tetramer from the polymerization of an oxetane monomer having a pendant $-\text{CH}_2-\text{O}-(\text{CH}_2)_n-$ Rf group wherein Rf is described above.

2. A laminate according to claim 1 wherein a surface of said

substrate has been printed at least one time.

3. A laminate according to claim 1, wherein a surface of said substrate has been embossed.

4. A laminate according to claim 1, wherein a surface of said substrate has been both printed and embossed.

5. A laminate according to claim 1, wherein the surface of said substrate includes a layer of plasticized vinyl chloride polymer.

6. A laminate according to claim 1, wherein said substrate comprises a cellulosic product, fibers, synthetic polymers, metal or ceramic.

7. A laminate according to claim 1, wherein said Rf group is independently a linear or branched perfluorinated alkyl group of 1 to 20 carbon atoms.

8. A laminate according to claim 7, wherein said hydroxyl terminated polymer includes repeat units from oxetanes and repeat units from tetrahydrofuran.

9. A laminate according to claim 7, wherein said second layer has the characteristic of being easily cleaned of undesired markings without using liquids.

10. The method which comprises;

1) applying to a substrate a layer of a catalyzed mixture of at least

a) one amino resin cross-linking agent and either

b1) a reactive polyester resin and

b2) a hydroxyl terminated polymer including repeat units from an oxetane having a pendant $-\text{CH}_2-\text{O}-(\text{CH}_2)_n-$ Rf group

or

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5 c) a reactive polyester resin including at least one repeat unit derived from copolymerizing into said polyester a hydroxyl terminated polymer including repeat units from an oxetane having a pendant $-\text{CH}_2-\text{O}-(\text{CH}_2)_n-$ Rf group, or combinations of a), b), and c)

2) subsequently heating said mixture to at least about 150°F for a period of time sufficient to cure and cross-link said layer, thereby providing a crosslinked layer,

10 wherein said Rf group, independently is a linear or branched alkyl group of 1 to 20 carbon atoms with a minimum of 25 percent of the hydrogens of said alkyl groups being replaced by F or said Rf group independently being an oxaperfluorinated or perfluorinated polyether having from 4 to 60 carbon atoms, and n being from 1 to 3.

11. A method according to claim 10, wherein said Rf of said repeat units is individually on said repeat units a perfluorinated alkyl having from 1 to 20 carbon atoms.

20 12. A method according to claim 10, where prior to applying said layer to said substrate, said substrate is printed at least one time.

13. A method according to claim 10, wherein said substrate comprises a cellulosic product, fibers, synthetic polymer, metal or ceramic.

25 14. A method according to claim 10, where prior to applying said layer to said substrate, said substrate is printed and embossed.

15. A method according to claim 10, wherein said substrate includes a layer of plasticized vinyl chloride polymer.

30 16. A method according to claim 15, wherein said vinyl chloride polymer is coated onto a fabric or backing.

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Sub
P3

Sub
B3

17. A method according to claim 15, of forming a wallcovering.

18. A method according to claim 11 of forming a dry erase surface.

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19. A composition, comprising;

a) at least one amino resin cross-linking agent and either

b1) reactive polyester resin and

b2) a hydroxyl terminated polymer including repeat units from an oxetane having a pendant $-\text{CH}_2-\text{O}-(\text{CH}_2)_n-\text{Rf}$ group,

or

c) a reactive polyester resin including therein at least one repeat unit derived from copolymerizing into said polyester a hydroxyl terminated polymer including repeat units from an oxetane having a pendant $-\text{CH}_2-\text{O}-(\text{CH}_2)_n-\text{Rf}$ group or combinations of a), b), and c)

wherein said pendant $-\text{CH}_2-\text{O}-(\text{CH}_2)_n-\text{Rf}$ group, independently, on different repeat units is a linear or branched alkyl group of 1 to 20 carbon atoms, a minimum of 25 percent of the hydrogen atoms of said alkyl group being replaced by F or said Rf group independently, being an oxaperfluorinated or perfluorinated polyether having from 4 to 60 carbon atoms, and n is from 1 to 3.

20. A composition according to claim 19, wherein Rf is said linear or branched alkyl group.

21. A composition according to claim 19, wherein said Rf is a linear or branched alkyl group of 3 to 10 carbon atoms.

22. A composition according to claim 19, wherein at least said amino resin and said polyester including repeat units from said

hydroxyl terminated polymer are reacted together to form a reaction product.

5 23. A composition according to claim 21, wherein at least said polyester, said hydroxyl terminated polymer, and said amino resin are reacted together to form a reaction product.

10 24. In an article including a substrate having a protective coating thereon, the improvement wherein the protective coating comprises

a) at least one amino resin cross-linking agent and either
b1) reactive polyester resin and
b2) a hydroxyl terminated polymer including repeat units from an oxetane having a pendant $-\text{CH}_2-\text{O}-(\text{CH}_2)_n-\text{Rf}$ group

15 or
c) a reactive polyester resin including therein at least one repeat unit derived from copolymerizing into said polyester a hydroxyl terminated polymer including repeat units from an oxetane having a pendant $-\text{CH}_2-\text{O}-(\text{CH}_2)_n-\text{Rf}$ group, or combinations of a), b), and c),
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wherein said pendant $-\text{CH}_2-\text{O}-(\text{CH}_2)_n-\text{Rf}$ group independently on different repeat units is a linear or branched alkyl group of 1 to 20 carbon atoms and a minimum of 25 percent of the hydrogen atoms of said alkyl group being replaced by F or said Rf, independently, being an oxaperfluorinated or perfluorinated polyether having from 4 to 60 carbon atoms, and in being from 1 to 3.
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30 25. In an article according to claim 24 wherein said a) and c) are reacted to form a crosslinked composition.

